

CLAIMS

1. A method of treatment of a patient in need of modulation of body mass or modulation of increase in body mass, and/or in need of modulation of plasma  
5 insulin, plasma glucose, plasma triglycerides and/or plasma cholesterol, comprising administering to the patient an effective amount of a perfluorooctanoic acid or a salt (preferably other than ammonium salt, preferably other than 75% straight chain ammonium salt) or an ester thereof; perfluorosuberic acid, perfluoroheptanoic acid, perfluorohexanoic acid,  
10 perfluoropentanoic acid, perfluorobutanoic acid or perfluoropropionic acid or a salt or an ester any thereof; or perfluorooctane.
2. A method of treatment of a patient in need of an antitumour agent or an antiinflammatory agent, or in need of modulation in lipid or eicosanoid status,  
15 comprising administering to the patient an effective amount of a compound as defined in claim 1.
3. A method of treatment of a patient who is overweight or obese and/or has diabetes, hyperlipidaemia, atherosclerosis, coronary heart disease, stroke,  
20 obstructive sleep apnoea, arthritis and/or reduced fertility, or is at risk of developing such a condition, comprising administering to the patient an effective amount of a compound as defined in claim 1.
4. A method of treatment of a patient in need of modulation of PPAR (for  
25 example PPAR $\alpha$ ) activity, comprising administering to the patient an effective amount of a compound as defined in claim 1.
5. A method of treatment of a patient in need of modulation of lipid or eicosanoid status or function, comprising administering to the patient an  
30 effective amount of a compound as defined in claim 1.

6. Use of a compound as defined in claim 1 in the manufacture of a medicament for treating a patient in need of modulation of PPAR (for example PPAR $\alpha$ ) activity.

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7. The method of claim 4 or use of claim 6 wherein the patient is in need of an increase in PPAR activity and the compound is a PPAR agonist.

8. The method or use of claim 7 wherein the PPAR is PPAR $\alpha$  or PPAR $\gamma$ .

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9. The use of a compound as defined in claim 1 in the manufacture of a medicament for the treatment of a patient in need of modulation of body mass or modulation of increase in body mass, and/or in need of modulation of plasma insulin, plasma glucose, plasma triglycerides and/or plasma cholesterol.

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10. The method of claim 1 or use of claim 9 wherein the patient is in need of reduction of body mass or prevention of increase in body mass, and/or in need of reduction of plasma insulin, plasma glucose, plasma triglycerides and/or plasma cholesterol.

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11. The use of a compound as defined in claim 1 in the manufacture of a medicament for the treatment of a patient who is overweight or obese and/or has diabetes, hyperlipidaemia, atherosclerosis, coronary heart disease, stroke, obstructive sleep apnoea, arthritis and/or reduced fertility, or is at risk of developing such a condition.

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12. The use of a compound as defined in claim 1 in the manufacture of a medicament for the treatment of a patient in need an antitumour agent or an antiinflammatory agent or of modulation of lipid or eicosanoid status or function, or of modulation of a lipid metabolising or binding entity activity.

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13. The method of treatment or use of any one of claims 1 to 12 wherein the compound is or comprises a perfluorooctanoic acid, or is more than 75% (for example 80%, 90% or 100%) linear perfluorooctanoic acid or a salt or ester thereof.

14. The method of treatment or use of any one of claims 1 to 12, wherein the compound is or comprises a perfluoroheptanoic acid or salt or ester thereof.

15. The compound, method or use of any one of claims 1 to 12 wherein the compound is a perfluoropentanoic acid or salt or ester thereof.

16. The method or use of any one of claims 1 to 15 wherein the patient is human.

17. A screening method for identifying a drug-like compound or lead compound for the development of a drug-like compound in which (1) a mammal is exposed to a compound as defined in claim 1 or derivative thereof (2) the plasma insulin, glucose, cholesterol and/or triglyceride level of the mammal is measured, and/or bodyweight of the mammal is measured, and/or lipid or eicosanoid status or function of the mammal is measured.

18. The method of claim 17 comprising the step of selecting a compound on exposure to which the plasma insulin, glucose, cholesterol and/or triglyceride level of the mammal is changed or reduced, and/or bodyweight or bodyweight increase of the mammal is changed or reduced.

19. A screening method for identifying a drug-like compound or lead compound for the development of a drug-like compound in which (1) a compound as defined in claim 1 or derivative thereof is exposed to a PPAR

polypeptide (2) the binding of the compound to the PPAR polypeptide is measured or the change in the activity of the PPAR polypeptide is measured.

20. A screening method for identifying a drug-like compound or lead  
5 compound for the development of a drug-like compound in which (1) a  
compound as defined in claim 1 or derivative thereof is exposed to a lipid  
metabolising or binding entity, for example cyclooxygenase (for example  
cyclooxygenase I or cyclooxygenase II) or phospholipase A (for example  
phospholipase A2) (2) the binding of the compound to the lipid metabolising or  
10 binding entity is measured or the change in the activity of the lipid  
metabolising or binding entity is measured.

21. A screening method for identifying a drug-like compound or lead  
compound for the development of a drug-like compound in which (1) a cell is  
15 exposed to a compound as defined in claim 1 (2) the phenotype (for example  
differentiation) and/or eicosanoid biosynthesis of the cell is measured.

22. The method of claim 21 further comprising the step of selecting a  
compound on exposure to which the phenotype, for example differentiation, of  
20 the cell is changed, and/or eicosanoid biosynthesis of the cell is changed,  
preferably reduced.

23. The use or method of any one of claims 1 to 12 wherein the compound is  
identified or identifiable by a screening method of any one of claims 17 to 22.

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24. A compound identified or identifiable by a screening method of any one of  
claims 17 to 22 for use in the manufacture of a composition for use as a food  
supplement or a food additive.

25. A food product comprising a foodstuff and a compound as defined in claim 1 or a compound identified or identifiable by a screening method of any one of claims 17 to 22, wherein the food is not laboratory rodent feed.
- 5 26. A kit of parts of screening system comprising (1) a library of compounds each as defined in claim 1 and (2) a PPAR polypeptide or polynucleotide encoding a PPAR polypeptide, and/or a test mammal.
- 10 27. A kit of parts of screening system comprising (1) a library of compounds each as defined in claim 1, and (2) a lipid metabolising or binding entity (for example COXI or COXII or phospholipase A2 or lipoxxygenase) or polynucleotide encoding a lipid metabolising or binding entity.
28. Any novel compound, use, kit, system or method as herein disclosed.